

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method for treatment of untreated injection water for a subsea injection well, ~~in which the said~~ injection water ~~may be being one of:~~

(A) water from a body of water overlying the injection well, and/or

(B) produced water from a well production stream; ~~the said method employing an comprising:~~

~~- lowering a water treatment apparatus and a connected water injection pumping equipment connected thereto that is lowered into said body of water overlying the subsea injection well,~~

said water treatment apparatus comprising at least one module provided with at least one receptacle and an associated network of lines with valves for allowing flow of injection water through said receptacle and line network during water injection into subsea well, and

said at least one receptacle being provided with at least one type of water-soluble, solid state chemical;

~~and is connected - connecting the water treatment apparatus and the water injection pumping equipment to the subsea injection well; for use under water, and in which water treatment equipment in the apparatus is assembled within at least one module, the at least one module containing at least one receptacle and an associated network of lines provided with associated valves through which the water may flow during the water injection, said method comprising:~~

~~- providing the at least one receptacle with at least one type of water-soluble solid-state chemical;~~

~~- bringing the said water into contact with the at least one solid-state chemical within the at least one receptacle, thereby causing said solid-state chemical it to gradually dissolve and mix with the contacting water, treated water thus emanating from said receptacle; and~~

~~- leading the treated water into an injection stream conveyed into the injection well and further into an associated reservoir.~~

2. (Previously presented) The method according to claim 1, comprising providing the at least one receptacle with at least one solid-state unit of the at least one chemical.

3. (Previously presented) The method according to claim 2, comprising providing the at least one receptacle with at least one solid-state chemical unit having at least one of the following forms: block, tablet, pill, granule and pellet.

4. (Previously presented) The method according to claim 1, 2 or 3, comprising providing the at least one receptacle with at least one of the following types of solid-state chemicals:

- Chlorine;
- poly-electrolytes;
- iron chloride;
- oxygen scavenger;
- corrosion inhibitor;
- scale inhibitor; or
- biocide.

5. (Previously presented) The method according to claim 1, comprising arranging one or more receptacles as replaceable receptacles.

6. (Previously presented) The method according to claim 5, comprising arranging one or more receptacles as replaceable cassettes, cartridges or inserts.

7. (Previously presented) The method according to claim 1, comprising arranging one or more receptacles for continuous flow of the water across and past the at least one chemical therein.

8. (Previously presented) The method according to claim 1, comprising arranging one or more receptacles for periodical shock-dosing of the at least one chemical therein.

9. (Previously presented) The method according to claim 1, comprising also connecting the apparatus, via said network of lines and associated valves, to at least one UV-sterilization receptacle in which at least one UV-lamp is placed for bactericidal action in water flowing therethrough.

10. (Previously presented) The method according to claim 1 or 9, comprising also connecting the apparatus, via said network of lines and associated valves, to at least one electro-chlorination receptacle in which a high-voltage cell is placed for inhibiting organism growth in water flowing therethrough, inasmuch as electro-chlorination may be carried out with or without copper-ion dosing.

11. (Previously presented) The method according to claim 1, comprising arranging the apparatus removably on a foundation on a water bed in proximity of the subsea well.

12. (Currently amended) An apparatus for treatment of untreated injection water for a subsea injection well, wherein the water treatment apparatus is structured for connection to a water injection pumping equipment so as to allow said apparatus and pumping equipment to be lowered into a body of water overlying the subsea injection well and then to be connected to the injection well;

- wherein said apparatus comprises at least one module provided with at least one receptacle and an associated network of lines with valves for allowing flow of injection water through said receptacle and line network during water injection into the subsea well; and
- wherein the at least one receptacle contains at least one type of water-soluble, solid-state chemical for treatment of the water admitted into the receptacle;

whereby said apparatus is structured in a manner allowing untreated injection water to enter said receptacle and contact said solid-state chemical so as to gradually dissolve and mix with the contacting water, treated water thus emanating from said receptacle to be conveyed into the injection well and further into an associated reservoir.~~in which the injection water may be water from a body of water overlying the well and/or produced water from a well production stream, the apparatus and a water injection pumping equipment connected thereto being disposed, in their position of use, under water in said body of water and in connection with the injection well, and in which water treatment equipment in the apparatus is assembled within at least one module, the at least one module containing at least one receptacle and an associated network of lines provided with associated valves through which the water may flow during the water injection, wherein the at least one receptacle contains at least one type of water soluble solid state chemical for treatment of the water, the at least one chemical dissolving gradually upon contact with the water and mixing with the water, after which treated water may be pumped into the injection well and into an associated reservoir.~~

13. (Cancelled).

14. (Currently amended) The apparatus according to claim 12~~13~~, wherein the at least one solid-state chemical exists in at least one of the following forms: block, tablet, pill, granule and pellet.

15. (Currently amended) The apparatus according to claim 12~~13~~, or 14, wherein the solid-state chemical is at least one of the following types of chemicals:

- Chlorine;
- poly-electrolytes;
- iron chloride;
- oxygen scavenger;
- corrosion inhibitor;
- scale inhibitor; or
- biocide.

16. (Previously presented) The apparatus according to claim 12, wherein one or more receptacles are replaceable.

17. (Previously presented) The apparatus according to claim 16, wherein one or more receptacles are replaceable cassettes, cartridges or inserts.

18. (Previously presented) The apparatus according to claim 12, wherein one or more receptacles are arranged for continuous flow of the water across and past the at least one chemical therein.

19. (Previously presented) The apparatus according to claim 12, wherein one or more receptacles are arranged for periodical shock-dosing of the at least one chemical therein.

20. (Previously presented) The apparatus according to claim 12, wherein the apparatus also is connected, via said network of lines and associated valves, to at least one UV-sterilization receptacle in which at least one UV-lamp is placed for bactericidal action in water flowing therethrough.

21. (Previously presented) The apparatus according to claim 12 or 20, wherein the apparatus also is connected, via said network of lines (34, 44) and associated valves, to at least one electro-chlorination receptacle in which a high-voltage cell is placed for inhibiting organism growth in water flowing therethrough, inasmuch as electro-chlorination may be carried out with or without copper-ion dosing.

22. (Previously presented) The apparatus according to claim 12, wherein the apparatus is removably connected to a foundation on a water bed in proximity of the subsea well.